

CLAIMS

What is claimed is:

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1. A method of implementing a personal digital assistant comprising a main unit and an option pack comprising the acts of:
    - (a) coupling the option pack with the main unit,  
the option pack comprising a first memory device configured to store one or more applications and drivers associated with the one or more applications, and a second memory device configured to store identification data,  
the main unit comprising a device manager configured to receive the identification data from the second memory device, a power supply, and a third memory device;
    - (b) transmitting the identification data from the second memory device to the device manager; and
    - (c) downloading the one or more applications and associated drivers from the first memory device to the third memory device.
  2. The method of implementing a personal digital assistant, as set forth in claim 1, wherein act (a) comprises coupling the option pack with the main unit via a 100-pin connector.

3. The method of implementing a personal digital assistant, as set forth in claim 1, wherein the first memory device and the second memory device comprise the same memory device.

4. The method of implementing a personal digital assistant, as set forth in claim 1, wherein the device manager comprises a driver to oversee the main unit and the option pack interaction.

5. The method of implementing a personal digital assistant, as set forth in claim 1, wherein the first memory device comprises a flash memory or a read only memory (ROM).

6. The method of implementing a personal digital assistant, as set forth in claim 1, wherein the second memory device comprises an electrically erasable programmable read only memory (EEPROM).

7. The method of implementing a personal digital assistant, as set forth in claim 1, wherein the third memory device comprises no applications and associated drivers prior to the act of downloading the applications and associated drivers from the first memory device to the third memory device.

8. The method of implementing a personal digital assistant, as set forth in claim 1, wherein the third memory device is configured to temporarily store one or more applications and associated drivers.

9. The method of implementing a personal digital assistant, as set forth in claim 8, wherein the third memory device is configured to store the one or more applications and associated drivers temporarily, the one ore more applications being received from the first memory device.

10. The method of implementing a personal digital assistant, as set forth in claim 1, comprising the act of separating the option pack from the main unit.

11. The method of implementing a personal digital assistant, as set forth in claim 10, wherein the act of separating the option pack from the main unit comprises the act of uploading the one or more applications and associated drivers from the third memory device to the first memory device.

12. The method of implementing a personal digital assistant, as set forth in claim 10, wherein the act of separating the option pack from the main unit comprises the act of removing the one or more applications and associated drivers from the third memory device.

13. The method of implementing a personal digital assistant, as set forth in claim 1, wherein the identification data comprises option pack feature information, option pack configuration, and option pack identification.

14. The method of implementing a personal digital assistant, as set forth in claim 1, wherein act (b) comprises the act of transmitting the identification data through a serial interface.

15. The method of implementing a personal digital assistant, as set forth in claim 1, wherein the act of transmitting the identification data from the second memory device to the device manager is facilitated by less power than the act of downloading the one or more applications and associated drivers from the first memory device to the third memory device.

16. The method of implementing a personal digital assistant, as set forth in claim 1, comprising the act of determining whether the power supply in the main unit has enough power to activate the option pack fully.

17. The method of implementing a personal digital assistant, as set forth in claim 1, comprising the act of determining whether the third memory device on the main unit has enough memory capacity to receive the applications and associated drivers stored on the second memory device of the option pack.

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18. The method of implementing a personal digital assistant, as set forth in claim 14, wherein act (c) occurs after the device manager has determined that there is enough power in the power supply of the main unit to activate the option pack fully.

19. The method of implementing a personal digital assistant, as set forth in claim 1, wherein act (c) occurs after the device manager has determined that the third memory device on the main unit has enough memory capacity to receive the applications and associated drivers stored on the second memory device.

20. A method of inserting an option pack into a main unit of a personal digital assistant (PDA), comprising the acts of:

- (a) powering-on the main unit;
- (b) determining whether there is an option pack coupled to the main unit;
- (c) providing an interrupt signal from the option pack to the main unit;
- (d) interrupting the processing of the main unit;
- (e) notifying the main unit that the option pack is present;
- (f) transmitting identification information from the option pack to the main unit; and
- (g) downloading one or more software applications and associated drivers from the option pack to the main unit.

21. The method, as set forth in claim 20, comprising the act of hot-plugging the option pack into the main unit.

22. The method, as set forth in claim 20, comprising the act of determining whether the main unit has enough power to enable the option pack.

23. The method, as set forth in claim 22, comprising the act of notifying a user as to whether the main unit has enough power to enable the option pack.

24. The method, as set forth in claim 20, comprising the act of determining whether the main unit has enough memory to store the applications and drivers available on the option pack.

25. The method, as set forth in claim 24, comprising the act of notifying a user as to whether the main unit has enough memory to store the applications and drivers available on the option pack.

26. A method of removing an option pack from a main unit of a personal digital assistant (PDA), wherein one or more applications and associated drivers have been downloaded to the main unit for use by the main unit, comprising the acts of:

- (a) de-activating one or more signals configured to detect the presence of the option pack in the main unit;
- (b) disabling control buffers;

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(c) terminating the functionality of the one or more applications running on the main unit; and

(d) removing the one or more applications and associated drivers from the main unit.

27. The method of removing an option pack, as set forth in claim 26, wherein act (d) comprises the act of uploading the one or more applications and associated drivers from the main unit to the option pack.